

Natural Light Takes Center Stage at Oklahoma City Ballet's New Rehearsal Space and Dance School



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Featuring arched steel trusses, floor-to-ceiling windows, and automated shading equipped with sun-sensor technology, OCB's new Susan E. Brackett Dance Center was designed to inspire and promote exceptional ballet performances.

Architect:
Allford Hall Monaghan Morris

Location:
Oklahoma City, Oklahoma USA

Building Type:
Office and School

Mermet Fabric:
E Screen 1% / Color - White

Shade System Manufacturer:
Hunter Douglas Architectural

Installer:
Russell Interiors

Founded by Yvonne Chouteau and Miguel Terekhov in 1972, Oklahoma City Ballet has since been the city's premier professional ballet company. Over the years, it has grown to boast talented dancers from around the world with four main-stage productions a year. The company offers dance classes for youth and adults, as well as multiple community engagement programs to students across the state.

Up until 2017, the flourishing company was struggling to support its programs by trying to fit within an 8,000-square-foot building. To keep with its mission of bringing high-quality classical and contemporary dance to Oklahoma City, the non-profit organization knew they needed a new, larger home.



OBC was able to secure the award-winning and former 26,685 sq. Ft. American Energy Partners Fitness Center in 2017. At this time, Sally Nicholas Starling, president-elect of the Oklahoma City Ballet Board of Trustees said in a statement to Oklahoma City News reporter Brandy McDonnell, "The ballet will have facilities that match the exceptional quality of performance and instruction happening in the company."

Design firm Allford Hall Monaghan Morris completed the previous AEP building in 2015. The structural design called for extending on top of an unused concrete basement and installing a series of arched steel trusses over the existing structure.

Allford Hall Monaghan Morris describes the architectural erection of the center as follows: "The trusses are clad with industrial-scaled profile metal sheeting to enclose a singular hanger-like volume with fully-glazed cables. Two boxes are then inserted; a single-story steel-clad volume punches through the front gable to provide an entry vestibule to the east, while a larger cube is placed within the central space."

The resulting building consisted of a basement floor with lockers, workout equipment, training studios, and an adjacent west-facing courtyard, as well as a top floor. The top floor housed two racquetball courts, an adaptable climbing wall, and a basketball court with the main entrance to the east.

Such creativity awarded the building recipient of the AIA Central Oklahoma Design Excellence Merit Award, the American Architecture Award 2016, the American Institute of Architects Central States Regional Design Excellence 2016, and even the Urban Land Institute award for Best Large Scale Infill Development Project 2016.

When Oklahoma City Ballet acquired the building, the structural floor plan remained intact, although all gym equipment was removed to make space for five new ballet studios. On the lower level, they had to remove two columns and reinforce the ceiling with steel as well as ensure proper lighting control was accessible on the top floor training spaces.

A half-cylinder-shape, the central space on the top floor of the facility features a striking half-crescent window ideal for bathing rehearsing dancers in natural light. To create a privacy barrier for the dancers and to filter glare, AHMM selected Hunter Douglas Architectural's RB 500 + automated shades featuring Mermet's E Screen 1% white fabric when undergoing renovations.

In this central studio space, OCB had to tear up the existing hardware floors and install a specialty sprung board floor. "This floor is important to the dancers because it helps preserve their joints overtime during practice," says Whitney Moore, Director of Development and Communications at OCB. "On top of the sprung floor is called a Marley. It is a black rubber mat, which, if exposed to too much sun, can bubble and cause the seamed strips to deteriorate and come apart. The window shades play an important roll in preserving the space and keeping equipment at its best, so the dancers can also give their best." In all, OCB spent more than two million in renovations.



At the arched, crescent window, ten high-performance shades line the bottom while another ten shades angle along the top of the frame. These smart, automated shades used Somfy's animeo sun sensor technology to lift and retract with the sun's movement. The effect? As the upper angled shades lower, the bottom half of the shades raise to meet in the middle, evoking a sun disappearing into the horizon. When the shades fully lift, the large-scale window's glass reflects Oklahoma's breathtaking sunsets, creating a naturally dramatic exterior.

By programming the shades with a bottom down, top-up automation solution, OCB can lower the bottom half to prevent direct glare, and the top half can be left down for maximized overhead daylighting. "E Screen 1% was an ideal choice for this application since it is one of the better performing fabrics for use with a retractable hembar," says Nick Inman, Manager - Specialty Products for Hunter Douglas Architectural. Once a basketball court, this central place is now the company's biggest and most inspiring dance studio.

"The shade system in our studio was an impressive, high-tech way to address a simple need for us. We could have gone many directions in finding a shade solution, but what we have now is clean, elegant, and fun to watch move... just like our dancers. When we do something at Oklahoma City Ballet, we try to do it artistically," says Robert Mills, Artistic Director at OCB. This innovative reinvention continues to be a bold venue, once for health and fitness, and now for the performing arts.

"When we have visiting international choreographers, dancers, and events with patrons, we make sure to take the opportunity to close the shades before their arrival. When here, we like to open the shades for a dramatic, beautiful reveal of the space. Our guests are blown away by the space," says Moore.

And it's not only the dancers who benefit from the use of automated shading. The building's energy use does as well. By using sun protection devices with active sun-tracking sensors, Oklahoma City Ballet can benefit from year-round energy savings. In the winter months, as soon as night falls, pre-programmed functions can close all shades to increase window insulation and avoid excessive heating consumption.

By using a tight openness fabric such as E Screen 1%, efficient use of solar energy through insulation and reflection is accomplished. A white color E Screen 1% fabric provides up to a 73% reflection of near-infrared energy – the part of the spectrum which carries heat. During the day, OCB can also adjust solar shade height to limit the distance sunlight enters the space. This feature ultimately protects the interior, as well as maximizing daylight availability and minimizing direct glare while dancers practice.

When preparing for the fabrication of the shade material, attention to detail with the geometry of the angled windows was critical. "If the shape of the system does not match the shape of the opening, then it would result in odd light gaps and look incorrect. The installer, Russell Interiors, used a laser to measure the high and low side of each trapezoid to ensure the accuracy of the final installation. We then modeled the hardware and fabric dimensions in cad. Our computerized cutting table cut the trapezoidal shapes we inputted. The rest, well, that is a secret," says Inman.

Such technical precision resulted in a successful installation, efficient use of the space, and a bigger and more comfortable facility for dancers to rehearse, so OCB can focus on what is most important.

In a separate interview with Oklahoma City News, Robert Mills, Artistic Director at OCB, said, "What we're going to be capable of with this change is enormous, because, yes, it's about touching more lives and having more classes. But that's more income for the organization, too, which will enable us to make more changes to the organization that will better serve, again, the community. To me, this space is about how better we can serve our community. I think a community with more than a million people in central Oklahoma...there is a lot more we can bring," Mills said.

"Mermet is honored to be a part of such a fantastic project that focuses on enriching the local community of Oklahoma with arts and culture, says Holly Bridwell Marketing Manager at Mermet. "We hope our Sun Control Textiles continue to contribute to bringing many encouraging, rich, and enjoyable moments to the many artists and students that grace this rehearsal studio for years to come."

For more information on Mermet, Sun Control Textiles visit: mermetusa.com

For details on Hunter Douglas Architectural visit: hunterdouglasarchitectural.com

See more installations from Russell Interiors here: russellinteriorsinc.com

Learn more about Allford Hall Monaghan Morris' design process here:

ahmm.co.uk/projectDetails/156/AEP-Fitness-Center-OKC-Ballet



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